Mohave County Miner.

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Big Electric Plant for Homestake.

Deadwood, S. D., April 5.—Work on a million dollar electric plant which the Homestake company is to build will commence in about 30 days, it is announced, and estimates allow one year and a half for its completion. The waters of Spearfish creek will furnish the power for this plant, which will be capable of carrying a load of 7,000 horse power and whose minimum capacity will be 5,000 horse power.

The plant will be located on the banks of the Spearfish, about half a mile below the present power house owned by the company, and will be as modern in all of its equipment and as complete as it is possible to make a plant. The intake will be some four miles below Savoy (Spearfish falls), and the coduit provided will have a width of 7 feet and a depth of 6 feet. It is the intention to turn all of the waters of the creek into this coduit, and thus, for the entire distance from the intake to the plant, a distance of between five and six miles, the creek bed will be dry, except for the water that comes into it from tributaries and drainage from the draws that come into the canyon. The company takes the water from the creek on its own ground, carries it to the plant, still on its own holdings, and returns it to the creek on Homestake ground. It is the intention to have the conduit with a concrete bottom for the entire distance

The water will be brought the entire distance from the intake to the plant, between five and six miles underground, and a series of eight tunnels will be required. These tunnels will vary in length from 2,000 to 4,000 feet, the longest being a little over 4,000 feet, and the length of time required for completing the entire work is gauged by the length of time which it will take to complete the tunnel work. Although there are to be eight tunnels and work will go on from both ends of each tunnel, yet it will not require 16 machines. The plan to be us d in operating these machines is interesting. A machine placed between two tunnels will drill one day, say, the south end of tunnel No. 2; the next day the waste will all be removed from this place, and while this is being done the drill will be backed up and commence drilling at the north end of tunnel No. 1. In this way economy of time, labor and machines will be effected, and the work can be done by nine machines. A dozen however, have been ordered and are now on the ground.

By bringing the water a distance of nearly six miles, a fall of 700 feet will be accomplished and the water will be brought down in a pressure pipe to the works. The line from the plant to Lead will be approximately 12 miles long, and will be so constructed as to prevent any unnecessary loss of power in the transmission. The power when brought into Lead will be used in the mills, machine shop, foundry, pattern shop, regrinding plant, the two sand plants and the slimes plant. Some idea of the amount of power will be seen when it is noted that the Homestake company has 1,000 stamps dropping and will allow two and a half horse power to the stamp.

With the exception of the water system which the company constructed a few years ago at a cost of 1,000,000$, this will be the largest single piece of work ever undertaken by the Homestake.

Tunneling Machines.

Although attempts to produce successful tunnel boring machines have been numerous, with but very few exceptions the machines have not reached that stage of development where their practicability could be demonstrated, and the mining public is still waiting patiently for the fulfilment of oft-repeated promises. Success, now, however, seems near.

Two machines—the Karns and the Sigafoos—have reached the stage where practical demonstrations are in order and sufficient financial backing has been obtained to give them thorough trials.

An 8-ft. Karns machine was recently given a trial near Boulder, Colo., and a Sigafoos machine of like size has been operated at Georgetown, Colo. Both have demonstrated that they can cut rock. It now remains to be shown that they can stand up to the work for long periods of time without serious annoyance from breakdowns, both in loss of time and in high expense for repairs. It is not sufficient that a tunneling machine be able to cut rock or pound it to powder. It must be able to remain in practically continuous operation for days and weeks at a time under all sorts of conditions that may be met in tunnel work. It must cut through soft rock and hard rock and rocks with streaks of unequal hardness. It must be of strong construction to withstand the continual jarring. One of the serious problems is to be able to remove the muck rapidly and completely, as any accumulation at the face would interfere with the operation of the machine. The inventors of the various machines have provided for many of the difficulties that may arise, but the effectiveness of these provisions is as yet an unknown quantity. The mucking question is now the interfering factor in the tests of the Sigafoos machine. This problem, however, is purely mechanical and its solution should not prove insurmountable. As with all untried inventions trouble from defects and weaknesses in design must be expected, but, unless these are due to incorrect principles, practical experience will teach how they may be corrected.

The field of usefulness open to successful tunneling machines is wide, should their performance prove to be all or even a fraction of what is claimed for them by their investors and promoters. So far nothing but estimates based on hopes and guess work are to be had regarding cost of machine tunnel driving, but even should the cost prove to be greater than expected it might not prove prohibitive. Some of the claims for machine tunneling over the present method of drilling and blasting are greater speed, lower cost and greater safety. The practical working out of the problem means a new era in mining.—Mining World.

Seeking Gold in River Bed.

The Empire Gold Dredging Co. of Los Angeles has bought a Lidgerwood drag bucket dredge costing 30,000$, daily capacity 1000 cubic yards, to place on its property at Las Vegas Wash, on the Colorado river, Lincoln County, Nevada, to operate 300 acres, of which it owns 1440 there, besides 340 acres at Laguna Dam, Yuma county, Arizona, an estimated total of 80,000,000 yards of workable gravel. The gravel, according to Secretary Meyer runs from 15 cents to 50 cents a cubic yard with an average of 25 cents continuous. The placer deposits at Laguna dam, tested by test pits, runs from 22 cents to 70 cents a cubic yard. The cost of handling is 6 1-2 cents per cubic yard. The gravel is from twenty to thirty feet deep, free gold, clean and easily secured by ordinary treatment, sluicing or amalgamation.

A subsidiary company is being formed, the Arizona Excelsior Dredging Co., which will put a dredger on 640 acres of Empire ground at Las Vegas Wash, across the river in Mohave county, Arizona, at a cost of 30,000$.

The Empire's officers are A. B. Call, president; J. R. McDonald, vice-president and general manager; D. F. Doggett, treasurer, and H. J. Meyers, secretary. The above with G. L. Bennett constitute the directors.

The Colorado River has long been known to be rich placer digging and since 1849 is said to have cut through, eroded and broken down great amounts of mineral ground. It is estimated that the placers contain over 500,000,000$.

The gold production of California since 1848 amounts to 1,875,513,691$, exclusive of the three months of 1909, of which 28 per cent came from the placers. 18,000,000$ of this was produced last year and approximately 5,040,000$, it is claimed, resulted from the operation of dredges.—Searchlight Bulletin.

Electricity Replaces Steam.

This year will witness the first important step to be taken by any of the overland roads in this state in the use of electricity for the hauling of railroad trains. The Great Northern will have completed the electric installation now under way to supply electricity for haulage of trains through the Cascade tunnel thereby eliminating the danger which has heretofore menaced human life in the passage through the three-mile long bore. With a three-phase system, down grade trains are expected to return a part of the energy to the line, thereby assisting in pulling up-grade trains to the summit of the divide. While this is the most important installation at present being made ready for operation by a steam road, it by no means covers all the important work to be undertaking this year, for the Canadian Pacific railway, Southern Pacific system, C. M. & St. P. railway are all contemplating conversion of their power from steam to electricity. It is now said that the greater portion of the mountain divisions of the last named company's road will be operated by electric power from the start. It is quite likely that future demands on the coal measures for transportation power purposes in this state at least will diminish rather than grow hereafter. The increasing cost of coal production, competition for business, exactions of the public for better service at lower cost, will compel this change in power generation.—Spokane Northwest Mining News.

New Air Suction Dredger.

Tonopah, Nev., April 6.—A centrifugal power dredger, now demonstrating its prowess at McKinley park, Sacramento, according to Captain O. Henry, a Tonopah mining man, will revolutionize placer mining.

Captain Henry has become associated with the owner of the plant, and is here now to look up placer ground that will pay to work by that device. He intends to visit Manhattan and Round Mountain at once.

"The device works somewhat on the principle of a suction carpet cleaner," said Captain Henry. "It consists of a 12-inch casing, shaped like a stovepipe. Inside of it is a small pipe carrying air to the end in the ground, the air having a pressure of 20 pounds to the square inch. The air forces everything that it loose and not too large to come up through the casing into sluice boxes. About two miners' inches of water is required to loosen the material. It is practically a plan of excavation and hoisting dirt by air pressure. It cleans the bedrock perfectly, better than you would do with a broom, taking every particle out of the crevices. The boulders, which you do not want anyway, it leaves, but it takes all the loose material from them, leaving them perfectly clean. It will sink 60 feet in one hour, and many places in 20 minutes, handling 500 tons of dirt a day. A 25 horse power engine, using distilate, runs the plant."

"Laying on of hands" for complaints, especially in children, is now taking the place of Christian Science. A mother cured her boy of the cigarette habit with one dose. She laid her left hand on the boy's neck, her right hand on one substantial slipper, and then laid the slipper where it would do the most good. It effected a cure.

Best Treatment for Colds.

"Most ordinary colds will yield to the simplest treatment," says the Chicago Tribune, "moderative laxatives, hot baths, a free perspiration and an avoidance of exposure to cold and wet after treatment." While this treatment is simple, it requires considerable trouble, and the one adopting it must remain in doors for a day or two, or a fresh cold is almost sure to be contracted, and in many instances pneumonia follows. Is it not better to pin your faith to an old reliable preparation like Chamberlain's Cough Remedy, that is famous for its cures of colds and can always be depended upon? For sale by H. H. Watkins.

Churn Drills at Globe.

Two churn drills are to be used to prospect the Inspiration ground. Consulting Engineer Krumb is at the property and will remain to see the drills installed. The Inspiration Co. has done a large amount of preliminary work, such as the construction of roads and trails, and has erected a number of buildings for the company's use and for the accommodation of its employees. The Keystone, which adjoins the Inspiration on the south, is under bond to the General Development Co. For several months prospect work has been carried on with churn drills, with satisfactory results, the sulphide deposit having been penetrated at several points.—Globe Silver Belt.

Under Sheriff Phil Grigsby, who is interested with Alex Sears, J. H. Bates, Frank Harbin and S. D. Gardom in the recent rich gold strike, situated in the Dripping Springs range of mountains, about 8 miles due east of Burns railroad station, returned Saturday from a visit to the property, and is very enthusiastic over the find. He was accompanied to the claims by Engineer Reynolds, one of the Gugenheim field experts, and the latter, after going over the 12 claims the boys have located, expressed great confidence in the future of the property. He was particularly pleased with the character of the ore, vein material and the general formation in which the veins lie. He states that every favorable condition that could be desired was present. The main vein has been cut and exposed to a depth of 100 feet by erosion where it protrudes from the vertical side of the mountain. At the surface of the bluff it shows a width of only a few inches, but gradually widens till at the base of the bluff it is fully ten feet wide, says Mr. Grigsby. The gangue is a heavy, compact oxide of iron and every piece of ore broken from this material shows free gold. Some of the specimens are phenominally rich. The boys have named their property the Gold Bluff group, and it is well named. They are now busy completing their location work and will follow this by active development work on the main ledge. They are satisfied that they have enough wealth in sight to meet the monetary requirements of themselves and all their posterity and are quietly devoting their time to uncovering the yellow riches, without wasting any lung power in shouting the news of their discovery from the house tops.—Florence Blade.

ARTICLES OF INCORPORATION
OF THE
Oro Lava Mining Company.

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, hereby adopt the following articles of incorporation for the purpose of forming a corporation under the laws of Arizona.

FIRST: The name of the corporation shall be Oro Lava Mining Company. The principal office of said corporation in Arizona shall be at Kingman. But said corporation shall have an office at New York, in the state of New York, or at such other place or places outside of Arizona as the by-laws shall provide, where the books of the corporation may be kept, all stockholders' and directors' meetings held, and all corporate business transacted.

SECOND: The general nature of the business to be transacted by this corporation is as follows: To in any manner and in any place, as principal agent, trustee or otherwise, acquire, deal in or dispose of, all kinds of real and personal property, including mines, mining claims, oil lands, coal lands, gas lands, or any of the products thereof, water, water rights and machinery, and to work, and to work, mine, explore and develop the same; to acquire and dispose of shares of capital stock and bonds of other corporations, to borrow money, and to execute notes, bonds, mortgages or other evidences of indebtedness; to make all contracts and to exercise all rights in respect to the above kinds of property that a natural person could or might make or exercise.

THIRD: The capital stock of this corporation shall be One Million Dollars, ($1,000,000), divided into One Million shares of the par value of One Dollar ($1.) each. At such time as the Board of Directors may direct, said stock shall be paid up in cash, property, services or other thing of value and the judgment of the directors as to the value thereof shall be final. All said stock, when issued, shall be and become fully paid and forever non-assessable.

FOURTH: The commencement of this corporation shall be the date of the filing of these articles according to law and the termination thereof shall be twenty-five years thereafter, with privileges of renewal for like periods perpetually.

FIFTH: The affairs of this corporation shall be conducted by a Board of not less than three nor more than nine Directors, and the following named shall constitute the Board of Directors until their successors are elected: H. E. Willsie, J. P. Ryan, J. B. Sperry, J. E. Coe. Thereafter the Board of Directors shall be elected from among the stockholders at the annual stockholders' meeting to be held on the second Tuesday in the month of January of each year. The officers of the corporation until their successors are elected shall be H. E. Willsie, President; J. P. Ryan, Vice-President; J. E. Coe, Secretary and Treasurer.

SIXTH: The highest amount of indebtedness, direct or contingent, to which this corporation is at any time to subject itself shall be $200,000.

SEVENTH: The private property of the stockholders and the officers of this corporation shall be exempt from all corporate debts.

In witness whereof, we have hereunto set our hands and seals this 25th day of January, 1909.

H. E. WILLSIE. (Seal)
J. B. SPERRY. (Seal)

STATE OF NEW YORK, } ss
County of New York }

Before me, Walter N. Thayer, a notary public in and for said County and State, on this day personally appeared H. E. Willsie and J. B. Sperry, to me known to be the persons who subscribed to the foregoing instrument, and acknowledged to me that they executed the same for the purposes and consideration therein expressed

Given under my hand and seal of office this 25th day of January, A. D. 1909.

WALTER N. THAYER,
[Seal] Notary Public.

My commission expires on the 30th day of March, A. D. 1910. Certificate filed in New York County.

Filed and recorded at request of Allen E. Ware, January 30, A. D. 1909, at 11 o'clock a. m., in Book 3, pages 303 305 of Incorporation Records of Mohave County, Arizona Territory.

R. A. ROBERTSON,
County Recorder.

By MARIE CARROW,
Deputy.

First insertion March 20—April 24